

January 19, 1999

VPCD-99-02 (Marine)

Dear Marine Engine and Vessel Manufacturer:

As you may know, the International Maritime Organization (IMO) recently adopted a new Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78).<sup>1</sup> Regulation 13 of this Annex establishes NOx emission limits applicable to propulsion and auxiliary engines greater than 130 kW installed in ships constructed on or after January 1, 2000.<sup>2</sup> Although the requirements of the Annex will not go into force until it is ratified by a certain number of states<sup>3</sup>, it is expected that vessels constructed on or after January 1, 2000 will be equipped with engines that meet the NOx requirements. This will ensure that these vessels will be in compliance when the Annex becomes enforceable.

Because the Annex has not yet gone into force, Member Countries cannot yet issue the Engine International Air Pollution Prevention (EIAPP) certificate that will be issued for an engine

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<sup>1</sup> A copy of this Annex and the NOx Technical Code are available in Public Docket A-97- 50, located at room M-1500, Waterside Mall (ground floor), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. The docket may be inspected from 8:00 a.m. until 5:30 p.m., Monday through Friday. A reasonable fee may be charged by EPA for copying docket materials.

<sup>2</sup> Regulation 13 NOx emission limits are defined by a NOx curve, as follows:

17.0 g/kW-hr	when n is less than 130 rpm
$45.0 \times n^{(-0.2)}$ g/kW-hr	when n is 130 rpm or more but less than 2000 rpm
9.8 g/kW-hr	when n is 2000 rpm or more

where n = rated engine speed (crankshaft revolutions per minute)

<sup>3</sup> Article 6 of Annex VI specifies that the provisions of the Annex "shall enter into force twelve months after the date on which not less than fifteen States, the combined merchant fleets of which constitute not less than 50 percent of the gross tonnage of the world's merchant shipping, have become Parties to it..." (i.e., they have signed and ratified the Annex).

family or engine group after compliance with the NOx Technical Code is demonstrated. To address this concern, the Marine Environmental Protection Committee (MEPC) of the IMO has issued Interim Draft Guidelines for the Application of the NOx Technical Code.<sup>4</sup> These Guidelines call on Flag State Administrations to issue a "Statement of Compliance" with the NOx Technical Code upon satisfactory completion of the NOx Technical Code Requirements.

In recognition of the usefulness of such an interim program, and pursuant to its authority granted in Section 103(g) of the Clean Air Act, EPA is establishing a voluntary program by which engine manufacturers can obtain a Statement of Compliance with the NOx Technical Code. The procedures for obtaining such a Statement of Compliance are outlined in greater detail below. This interim program will ensure that engines are made compliant prior to entry in force of both MARPOL Annex VI and the national CI marine emission control program.<sup>5</sup>

It is important to note that a Statement of Compliance issued pursuant to this voluntary program is not intended to be equivalent to an EIAPP or a EPA certificate of conformity. A Statement of Compliance is merely intended to provide evidence that the manufacturer has voluntarily complied with the requirements of the NOx Technical Code and has provided EPA with sufficient evidence to support such an assertion. A Statement of Compliance is intended to be an interim measure pending issuance of the EIAPP, which cannot occur until the Annex enters into force. After entry into force, engine manufacturers will be required to obtain EIAPPs for the engines that are covered by Statements of Compliance. While the Interim Draft Guidelines recommend that Administrations take the Statement of Compliance into account when issuing EIAPPs, it is not a requirement. Engine manufacturers should take steps to ensure that the necessary data will be available for examination as part of the EIAPP application process at a later date.

## **Application Process**

The process to obtain Statement of Compliance is similar to EPA's typical engine certification processes. Manufacturers wishing to obtain Statement of Compliance should contact Mr. Tom Stricker to obtain a manufacturer number and computer templates to

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<sup>4</sup> Interim Draft Guidelines for the Application of the NOx Technical Code, MEPC 42/WP11.

<sup>5</sup> Notice of Proposed Rulemaking (NPRM) published December 11, 1998, at 63 FR 68508.

transfer data to the Agency. The computer data templates require the use of a software package entitled FileMaker Pro. This software is commercially available and can be purchased from any computer software store. Although the use of these templates is not strictly required, the templates will save significant EPA processing time and lead to much faster issuance of a Statement of Compliance.

Mr. Tom Stricker may be reached at the following address for normal mailings: Tom Stricker, Team Leader, Highway and Nonroad CI Compliance Team, EPA Headquarters (6403-J), Washington, DC 20460. For express mail deliveries only (regular U.S. mail delivered to this address will be returned to the sender), use the following address: Tom Stricker, Team Leader, Highway and Nonroad CI Compliance Team, U.S. Environmental Protection Agency, 501 3rd St NW (Mail Code 6403-J), Washington, DC 20001.

Engine testing shall be performed in accordance with the requirements set out in the NOx Technical Code. That document also contains important information concerning the choice of engine family or engine group designation, allowable adjustable parameters for each, and the documentation that must accompany each engine, including the Engine Technical File.

Prior to submitting an application, the manufacturer should obtain EPA approval for the following items. In lieu of an advance approval by EPA, the manufacturer may make its own determination using good engineering judgment and document the decision and basis for the decision in the application for Statement of Compliance (described below). EPA will evaluate such manufacturer determinations when considering the manufacturer's application for a Statement of Compliance.

- Engines to be combined within an engine family or group
- Selection of the engine to be tested. The engine selected for testing should be worst case engine (i.e., highest emission levels) within the family or group.
- Special test procedures to be used during testing
- Parameter adjustments available on the test engine and the specific values chosen for testing. Unless the manufacturer can support another setting with usage data, the test engine should be adjusted to achieve the best fuel economy within the range of user-adjustable parameters specified by the engine manufacturer.

To obtain a Statement of Compliance, the manufacturer shall apply with a letter signed by the manufacturer's designated lead environmental or engineering officer which contains the following items:

- Manufacturer of the engine
- Engine name and brief description of the engine that is the subject of the application
- Rated RPM of the engine and calculation of the applicable NOx emission standard
- Statement that the engines comply with MARPOL Annex VI Regulation 13 NOx emission limits
- Statement that the emission measurements were conducted according to the IMO Technical Code specifications
- Statement acknowledging the right of entry for designated officials of the U.S. government to verify information and test data relating to this application and installation and operation of engines on-board ships.
- Statement that the engine does not contain any defeat devices, as that term is defined in Section 94.2 of the proposed domestic regulations

With the above letter, the manufacturer should submit an application for Statement of Compliance which contains at least the following items:

- Technical description of the engines which are to be covered by the Statement of Compliance
- Description of the devices or engine calibrations used to achieve emission compliance
- Description of any electronic controls to the engine including the parameters sensed and controlled and the general characteristics of the control strategy
- Description of the adjustable parameters (which affect emissions) and the range of adjustment available to the operator of the engine
- Description of the test engine (including the settings of the adjustable parameters used during testing) and a rationale for its selection
- Test results for the test engine (The manufacturer may use a printout of the completed computer data templates to satisfy this requirement)

Lastly, the manufacturer shall supply the completed computer data templates (which includes the results of emission testing, the source of data, and other information) on a floppy disk.

The letter, application, and template disk should be sent to Tom Stricker at the address specified above. Manufacturers should allow at least 30 days for EPA review. Incomplete submissions or inaccurate computer data templates will lengthen the review period.

Please contact Mr. Eldert Bontekoe at (734)214-4442 if you have any questions on these MARPOL Statement of Compliance procedures.

Sincerely,

Jane Armstrong, Director  
Vehicle Programs and Compliance Division